

## Description of Test

The *Fitnessgram* was developed by the Cooper Institute for Aerobics Research in Dallas, Texas and endorsed by the American Alliance for Health, Physical Education, Recreation, and Dance. The primary goal of the *Fitnessgram* is to assist students in establishing physical activity as part of their daily lives. Because of this goal, *Fitnessgram* provides a number of options for each fitness area so that all students, including those with special needs, have the maximum opportunity to participate in the tests. Availability of options is especially important in measurement of body composition, which is the component of physical fitness that tends to concern parents the most. With an additional alternative for body composition measurement, school districts are more comfortable completing the section of the fitness test.

Physical fitness consists of three components: 1) aerobic capacity, 2) body composition, and 3) muscular strength, endurance, and flexibility. To ensure thorough measurement of all three components, the *Fitnessgram* test is made up of the following six major fitness areas with multiple performance task options for most areas:

### **Aerobic Capacity**

- The Pacer
- One-Mile Walk/Run
- Walk Test

### **Body Composition**

- Skinfold Measurements
- Body Mass Index

### **Abdominal Strength and Endurance**

- Curl-Up

### **Trunk Extensor Strength and Flexibility**

- Trunk Lift

### **Upper Body Strength and Endurance**

- Push-Up
- Modified Pull-Up
- Pull-Up
- Flexed Arm Hang

### **Flexibility**

- Back-Saver Sit and Reach
- Shoulder Stretch

To complete the *Fitnessgram*, students are required to participate in the following:

- One of the options from aerobic capacity
- One of the options from body composition
- The curl-up test
- The trunk lift test
- One of the options from upper body strength and endurance
- One of the options from flexibility

A brief description of major areas of the *Fitnessgram* and the performance task options are included here.

## Aerobic Capacity

This is perhaps the most important indicator of physical fitness, and it assesses the capacity of the cardiorespiratory system by measuring endurance.

The Pacer (Progressive Aerobic Cardiovascular Endurance Run). This is a multi-stage fitness test set to music, which provides a valid and fun alternative to the customary distance run. It is strongly encouraged for students in kindergarten through third grade, but may be used in all grades. The objective is to run as long as possible back and forth across a 20-meter distance at a specified pace that gets faster each minute.

One-Mile Walk/Run. The objective is to walk and/or run a one-mile distance at the fastest pace possible.

Walk Test. The objective is to walk a one-mile distance as quickly as possible while maintaining a constant walking pace the entire distance. This test is for students who are 13 years and older. The score is calculated using a formula that combines the walk time (in minutes and seconds) and the heart rate taken at the end of the walk.

## Body Composition

Body composition results provide an estimate of the percent of a student's weight that is fat compared to the "fat-free" body mass that comes from muscles, bones, and organs.

Skinfold Measurements. Measurements of the thickness of the skinfold on the back of the upper right arm and the inside of the right calf are taken using a

device called a skinfold caliper. A formula is used to calculate percent body fat using these measurements.

Body Mass Index. This test provides an indication of a student's weight relative to his or her height. Height and weight measures are inserted into a formula to calculate the body mass index. Although not as accurate an indicator of body composition as the skinfold measurement, school districts and schools find this measurement less of a parent concern than skinfold measurements.

## **Abdominal Strength and Endurance**

Abdominal strength and endurance are important in promoting good posture and correct pelvic alignment. Strength and endurance of the abdominal muscles are important in maintaining low back health.

Curl-Up Test. The objective of this test is to complete as many curl-ups as possible up to a maximum of 75 at a specified pace.

## **Trunk Extensor Strength and Flexibility**

This test is related to low back health and vertebral alignment.

Trunk Lift. The objective of this test is to lift the upper body a maximum of 12 inches off the floor using the muscles of the back and to hold the position long enough to allow for the measurement of the lift distance.

## **Upper Body Strength and Endurance**

This test measures the strength and endurance of the upper body and is important in maintaining functional health and promoting good posture. It is important to have strong muscles that can work forcefully and/or over a period of time.

Push-Up. The objective of this test is to complete as many push-ups as possible at a specified pace.

Modified Pull-Up. The objective of this test is to successfully complete as many modified pull-ups as possible. The Modified Pull-Up is different from a Pull-Up in that a student performs the test by lying on his or her back directly under a bar, and grasping the bar to pull up until the chin reaches a specified level.

Pull-Up. The objective of this test is to correctly complete as many pull-ups as possible.

Flexed Arm Hang. The objective of this test is to hang by the arms with the chin above a bar as long as possible.

## **Flexibility**

This test measures joint flexibility, which is important to functional health.

Back Saver Sit and Reach. The objective of this task is to assess the flexibility of the lower back and posterior thigh. Using a special box with a ruler attached and beginning in a sitting position with one leg extended and the other leg bent, the student extends forward to reach as far as possible on top of the box. After measuring one side, the student switches the position of the legs and reaches again. The distance reached is measured for both sides of the body.

Shoulder Stretch. This is a simple test of upper body flexibility. The student should be able to touch the fingertips together behind the back by reaching over both the right and left shoulder and under the elbow.

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